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UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

SPACE DATA CORPORATION,
 	
              Plaintiff,
 	
v.
 	
ALPHABET INC., and GOOGLE LLC.,
 	
              Defendants.
	Case No. 5:16-cv-03260-BLF (NC)
	
	PLAINTIFF SPACE DATA'S MOTION FOR PARTIAL SUMMARY ADJUDICATION
	
	Date: May 17, 2018
	Time: 9:00 a.m.
	Courtroom: 3, Fifth Floor
	Judge: Hon. Beth Labson Freeman

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NOTICE OF MOTION

PLAINTIFF SPACE DATA CORPORATION HEREBY GIVES NOTICE that on May 17, 2018, at 9:00 a.m., in Courtroom 3, Fifth Floor, of the United States District Court for the Northern District of California, San Jose Division, located at 280 South First Street, San Jose, California, a hearing will be held by the Honorable Beth Labson Freeman, United States District Judge, on Space Data Corporation's ("Space Data" or "Plaintiff") motion for partial summary adjudication on judicial estoppel.

Through this motion, Space Data seeks an adjudication that: (i) Defendants Alphabet Inc., and Google LLC (collectively "Google" or "Defendants") are judicially estopped from arguing that references disclosed during proceedings involving Defendants' patent applications and/or patents before the United States Patent and Trademark Office ("USPTO") and/or foreign patent offices, and references duplicative of the disclosed references, constitute prior art as to asserted claims 1, 2, 4 and 17 of Space Data's U.S. Patent No. 9,678,193 (the "'193 Patent") under 35 U.S.C. §§ 102 and/or 103; and (ii) Defendants are judicially estopped from arguing that asserted claims 1, 2, 4 and 17 of the '193 Patent are invalid under 35 U.S.C. §§ 101, 102, and/or 103.

This Motion will be based upon this Notice, the Memorandum of Points and Authorities, the Declaration of Spencer Hosie in support of this Motion, the Court's files herein, and any other documentary or oral evidence presented at the time of the hearing.

MEMORANDUM OF POINTS AND AUTHORITIES

I.   INTRODUCTION, SUMMARY, AND STATEMENT OF THE ISSUES TO BE DECIDED.

In January 2012, Google filed a foundational patent application covering its balloon internet technology, now known as Project Loon. The PTO initially rejected Google's claims as obvious and anticipated by several references. Google amended its claims, and then told the PTO that the amended claims were fully novel and patentable over the prior references. The PTO agreed, and issued U.S. Patent 8,820,678 ('678) to Google in late 2014.

As this was underway, Google filed many analogues of the '678 application in

numerous foreign jurisdictions, including in the EU. These analogues were word-for-word identical to Google's '678 filing as to the specification and the core claims. Unsurprisingly, given the USPTO presentation record, these applications, too, were initially rejected over the same references. Google then amended its claims exactly as it had in its domestic '678 prosecution, and even now insists that these foreign counterparts issue as novel and fully patentable. They very likely will issue shortly, and indeed, some already have. *See* below § IIE.

In 2016, pursuant to Space Data's request, an interference proceeding before the PTAB. Space Data asserted that it was the prior and superior rights holder. Google conceded this point, and the PTAB thereafter cancelled Google's '678 claims. These claims then issued as Space Data U.S. Patent No. 9,678,193 (the "'193 Patent"). *That is, Space Data now owns the exact claims that Google itself once prosecuted as fully novel and patentable (and even now continues to prosecute as valid offshore).*

And so, to the point of this motion: In this Space Data infringement case, Google is now arguing that the '193 core claims—the very claims it defended as valid—are now invalid as anticipated and obvious. As proof, Google cites the very references Google itself told the PTO did not anticipate or make obvious. That is, Google's position in this Space Data infringement case is directly contrary to Google's position when it prosecuted the identical claims as its own, and indeed contrary to its current position in its ongoing foreign '678 prosecutions.

It is literally true that the only difference between Google's '678 claims and Space Data '193 claims is the identity of the owner: when Google's claims, they were non-obvious and fully patentable; when Space Data's, they are unpatentable and fully obvious. How can this be? Validity does not, and should not, turn on the accident of ownership.

Google was either wrong in its historical '678 prosecution, and continues to be wrong as it prosecutes '678 offshore, or it is wrong in this federal court. But there is a larger point here: a party cannot change its of-record position as convenience alone might dictate. Put

1 simply, once a party makes a representation to a judicial or quasi-judicial agency (including

2 the PTO) to secure a benefit, that party is estopped from taking a contrary position simply

3 because its circumstances changed.

4   As applied here, Google is estopped from arguing that the prior references it

5 disavowed earlier now render '193 obvious and anticipated. It is also estopped from arguing

6 that the very invention it claimed as patentable in its own prosecutions, and continues even

7 now to claim as patentable offshore, is invalid simply because Space Data now owns the

8 claims in this country.

II.   STATEMENT OF THE FACTS.

A.   Space Data.

    Space Data was founded by two MIT engineers to create a balloon-borne internet
mesh network. After tens of millions of dollars in R&D funding, the Company developed a
workable and thoroughly novel technology for flying balloons in ordered constellations to
provide seamless internet coverage, a technology now protected by numerous U.S. patents
(including one captured from Google; *see* below).

    In 2008, Google approached Space Data about a potential acquisition. Under an
NDA between the parties, Space Data disclosed numerous trade secrets, including its full
financials. The Google due diligence culminated in an 11-person Google team, including the
two Google co-founders Larry Page and Sergey Brin, traveling to the Space Data facilities in
Chandler, Arizona, and reviewing Space Data's proprietary technology in detail.

    After this visit, Google suddenly went dark, explaining to Space Data that Google
was offended by a Wall Street Journal article that mentioned Google's interest in Space Data.

B.   Google's Project Loon.

    As Google now tells it, Google began to work on Loon in the summer of 2011, when
it hired an engineer from Apple, Richard DeVaul. DeVaul says that he stumbled on the idea
of a balloon-borne internet constellation flying with the winds in the stratosphere. ███

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C.   Google's Foundational Loon Patents.

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In January 2012, Google filed several foundational Loon patent applications,

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including one that covered the core concept of a balloon-borne internet constellation. Google

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managed the constellation by sailing individual balloons by exploiting microwind currents in

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the stratosphere (the '678 Application). In its '678 prosecution, Google disclosed numerous

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pieces of prior art, and said these references neither anticipated nor made the claims obvious.

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These references included several prior U.S. patents, specifically Campbell, Seligsohn, and

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Knoblach (Space Data co-founder). (These are the very references that Google now asserts

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against Space Data; *see* below.)

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The PTO initially rejected Google's '678 claims as anticipated by Campbell and

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obvious. As the PTO put it:

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18   For Claim 1, figures 2-7 and the abstract of Campbell '263 disclose
        a method comprising: determining a location of a target balloon;

19   determining locations of one or more neighbor balloons relative to the
        determined location of the target balloon, wherein the target balloon

20   comprises a communication system that is operable for data
        communication with at least one of the one or more neighbor balloons;

21   determining a desired movement of the target balloon based on the
        determined locations of the one or more neighbor balloons relative to the

22   determined location of the target balloon; and controlling the target
        balloon based on the desired movement of the target balloon.

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24   * * *

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26   For Claims 10-12, while Campbell '263 discloses that the target
        balloon is moved with respect to the other neighboring balloons based on

27   wind conditions, it is silent about the details on how it uses the wind
        conditions. However, the Examiner takes Official Notice that it is well

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known in the art that potential energy, gradient and direction of the gradient of the wind is used to determine how the wind will affect the movement of the balloons and how to use that wind to move that balloon. Therefore it would have been obvious to someone of ordinary skill in the art at the time of the invention to modify Campbell by using potential energy, gradient and direction of gradient of the wind to control the balloons movement.

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See Hosie Dec., Ex. 1 (1/3/2014 Non-Final Rejection).

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Google then scheduled an examiner interview, and argued that a claims amendment

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would overcome the prior art and obviousness rejections. The Office tentatively agreed, and

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asked that Google submit the amended claims with a detailed explanation of why the

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claims—as amended—overcame the references and were not obvious. *See* Hosie Dec., Ex. 2

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(3/19/2014 Interview Summary) ("These amendments and arguments appear to overcome the

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Campbell '263 reference…").

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Google did just that in March 2014. Its amended claims 1 and 2 were as follows:

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Amendments to the Claims

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1.   (Currently Amended) A method comprising:

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determining a location of a target balloon;

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determining locations of one or more neighbor balloons relative to the determined location of the target balloon, wherein the target balloon comprises a communication system that is operable for data communication with at least one of the one or more neighbor balloons;

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determining a desired movement of the target balloon based on the determined locations of the one or more neighbor balloons relative to the determined location of the target balloon, wherein the desired movement of the target balloon comprises a desired horizontal movement of the target balloon; and

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controlling the target balloon based on the desired movement of the target balloon, wherein controlling the target balloon based on the desired movement of the target balloon comprises controlling an altitude of the target balloon based on the desired horizontal movement of the target balloon.

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2.   (Cancelled)

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3.   (Currently Amended) The method of claim [[2]] 1, wherein

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controlling the altitude of the target balloon based on the desired
horizontal movement of the target balloon comprises:

determining that the desired horizontal movement of the target
balloon can be achieved by exposing the target balloon to ambient winds
of a particular velocity;

determining that ambient winds of the particular velocity are likely
to be available at a particular altitude; and

adjusting the altitude of the target balloon to attain the particular
altitude.

See Hosie Dec., Ex. 3 (3/24/2014 Response to Office Action) at 2-3 (underscore in the

original).

In its accompanying written justification, Google told the Office that the idea of

controlling internet balloons by moving them vertically to catch microwinds to move as

desired horizontally, all as part of a coherent balloon-borne internet constellation, was

manifestly novel and not anticipated:

In rejecting claim 2, the Examiner alleged that Campbell discloses
"wherein controlling the target balloon based on the desired movement of
the target balloon comprises controlling an altitude of the target balloon
based on the desired horizontal movement of the target balloon." *See*
Office Action, pp. 3-4. Applicant submits, however, that Campbell
includes no such disclosure. Thus, the feature of "controlling an altitude
of the target balloon based on the desired horizontal movement of the
target balloon," as recited in amended claim 1, and the feature of "control
an altitude of the balloon based on the desired horizontal movement of the
balloon," recited in amended claim 26, clearly distinguish over Campbell.

Accordingly, Applicant submits that claims 1 and 26, as amended, are
allowable over Campbell for at least the foregoing reasons. Applicant further submits
that claims 3-5, 7-22, 26, 28 and 30-31 are allowable for at least the reason that they
form allowable independent claims.

Id. at 15.

The PTO accepted Google's position and amended claims, and the '678 patent issued

in late 2014. *See* Hosie Dec., Ex. 4 (Issue Notification).

D.   Related Domestic Applications.

As Google moved the '678 prosecution forward, it filed numerous other patents

containing claims very close in concept to '678 Claim 1. For example, U.S. Patent 9,407,362, filed in March 2014 and issued in August, 2016, has Claim 12, which read as follows:

> 12.   The system of claim **10**, wherein each of the one of more of the second balloons and the one or more of the first balloons is further operable to:
>
> use altitudinal wind data to determine a target altitude having wind that corresponds to a desired lateral movement of the respective balloon; and
>
> cause the altitude-control system to initiate altitudinal movement of the respective balloon towards the target altitude in an effort to cause the desired horizontal movement of the respective balloon.

See Hosie Dec., Ex. 5 (U.S. Patent 9,407,362) at 23:36-45. This is a simpler '678 Claim 1 copy. There are literally dozens of claims just like this in Google's Loon patent portfolio.

From January 2012 through 2016, Google repeatedly told the PTO that the amended '678 claims – directly in '678 and as emulated in related applications—were novel and patentable.

E.   Google's Foreign '678 Counterparts.

As Google moved its '678 Loon prosecutions forward domestically, Google filed numerous foreign '678 analogues, i.e., exactly the same '678 specification and claims that it filed in the United States. Unsurprisingly, given the U.S. prosecution history, the foreign patent offices also initially rejected these claims over the Campbell reference and as obvious given the Campbell reference. Time and again, Google then made exactly the same amendment in these foreign prosecutions as it had made in the United States, with the same justification. For example, in its EU '678 analogue prosecution, here is the amendment Google made; it is identical to the '678 core claims:

> 1.   A method comprising:
>
> determining a location of a target balloon (102A-102F, 206A-206I, 300, 502);
>
> determining locations of one or more neighbor balloons (504, 506,

508, 510) relative to the determined location of the target balloon, wherein the target balloon comprises a communication system (316, 318) that is operable for data
communication with at least one of the one or more neighbor balloons;

determining a desired movement of the target balloon based on the determined locations of the one or more neighbor balloons relative to the determined location of the target balloon, wherein the desired movement of the target balloon comprises a desired horizontal movement of the target balloon; and

controlling the target balloon based on the desired movement of the target balloon, wherein controlling the target balloon based on the desired movement of the target balloon comprises controlling an altitude of the target balloon based on the desired horizontal movement of the target balloon.

See Hosie Dec., Ex. 6 (12/5/2016 Amended Claims with Annotations for European Patent

App. No. 13735769.5) (underscore in original, indicating amendment).

In a December 2016 letter, well after Space Data filed this case, and all after the

PTAB cancelled Google's '678 claims, *see* below, Google counsel argued that this

amendment overcame the prior art references and was fully novel and patentable.   As

Google put it then:

The subject matter of former claim 2 has been incorporated into claim 1. New claim 1 now specifies that "the desired movement of the target balloon comprises a desired horizontal movement of the target balloon", and that "controlling the target balloon based on the desired movement of the target balloon comprises controlling an altitude of the target balloon based on the desired horizontal movement of the target balloon".

. . .

Novelty and Inventive Step

D1 [Campbell] does not disclose that the desired movement of the target balloon comprises "a desired horizontal movement of the target balloon", and that the "controlling the target balloon based on the desired movement of the target balloon comprises **controlling an altitude of the target balloon based on the desired horizontal movement of the target balloon"** (emphasis added), as recited in amended claim 1.

. . .

With regards to inventive step, we highlight that the invention according

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to amended claim 1 "may be configured to change its horizontal position by adjusting its vertical position (i.e. altitude)", "[s]ince winds in the stratosphere may affect the locations of the balloons in a different manner" (see e.g. paragraph [0017] of the description). D1 does not disclose that "the desired movement of the target balloon comprises a desired horizontal movement of the target balloon", or "controlling an altitude of the target balloon based on the desired horizontal movement of the target balloon".

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Starting from D1, a skilled person would not have had any incentive to attempt to modify the prior art disclosed in D1 in order to control "an altitude of the target balloon based on the desired horizontal movement of the target balloon", as D1 uses an intrinsically different technique for controlling adjustments of the positions of the aerial platforms.

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For at least the reasons given above, we submit that the method of amended claim 1 is novel and inventive in compliance with Article 52 EPC.

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We submit that the application is in order for allowance. We request oral proceedings only as a precaution against refusal of the application.

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See Hosie Dec., Ex. 7 (12/5/2016 letter accompanying subsequently filed items).

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Google is still awaiting its EU '678 analogue issuance, and is—even as we write—

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still prosecuting this application as novel and valid. It is doing exactly the same thing in

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numerous other foreign jurisdictions, that is, right now prosecuting '678 analogues as novel

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and patentable over all the prior art disclosed. *See* Ex. 37.

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F.   The Interference.

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In 2014, Space Data learned of the '678 application and copied the claims rightfully

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belonging to Space Data into a then-pending application (No. 14/328,331, which eventually

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became the '193 Patent). In March 2015, the examiner issued a notice of allowance to Space

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Data on the copied claims. Following, in April 2015, Space Data began the process of

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instituting an interference proceeding with the PTAB to resolve the dispute ("the

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Interference") and the Interference officially began in June of 2016. Space Data asserted that

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it was the prior and superior rights holder as to Google's core '678 claims. In the

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Interference, Google conceded this point, and the PTAB accordingly cancelled Google's

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'678 claims. As the panel put it:

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Mr. Krumholz, Counsel for Junior Party DeVaul, indicated that Junior Party DeVaul **did not intend to contest priority in this case.**

We interpret this as a concession of Priority. *See* 37 CFR § 41.127(b)(3) and 37 CFR § 41.127(b)(4)

In view of the foregoing, it is—

ORDERED that judgment be entered against Junior Party DeVaul for count 1 (Paper 1);

FURTHER ORDERED that claims 1-24 of Junior Party DeVaul's involved US Patent 8,820,678 be CANCELLED, 35 U.S.C. §135(a);

See Hosie Dec., Ex. 8 (8/31/2016 Interference Judgment) (emphasis added).[1]

The PTAB judges, Space Data, and Google, all accepted that the core '678 claims were valid. As described more fully below, in both the '678 prosecution and the Interference Proceeding, Google maintained that the claims of the '193 Patent were valid above the prior art. As to one of the references Google now argues is disabling (U.S. Pat. No. 6,402,090 ("Aaron" or "'090")), Google conceded during the Interference Proceeding that Aaron **did not invalidate** the core '678 claims. In the Interference, Space Data argued that several secondary '678 dependent claims (nos. 18-20) were obvious, over a specific reference, Aaron '090. In the Interference, Google agreed with Space Data that these secondary '678 claims (nos. 18-20) were obvious given Space Data's prior claim, when coupled with Aaron. But, at no point in this proceeding did Google argue that Aaron invalidated the *core* '678 claims (those that became '193), and indeed its agreement on the dependent claims accepted—as its central premise—that the core '678 claims were novel and patentable over Aaron. Indeed, Google had also itself disclosed this Aaron reference in several Loon applications,[2] arguing that its Loon technology was novel and patentable over Aaron.

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[1] The August 31, 2016 Judgment was later amended and issued in its final form on December 22, 2016, cancelling '678 claims 1-12 and 16-24.

[2] *See* Hosie Dec., Exs. 9, 10, 11 (Information Disclosure Statement filed on January 15, 2013, by Google in the prosecution of U.S. Patent No. 8,781,727; Information Disclosure Statement filed on December 27, 2012, by Google in the prosecution of U.S. Patent No. 8,948,927; Information Disclosure Statement filed on March 22, 2015, by Google in the prosecution of U.S. Patent No. 9,275,551).

As the PTAB summarized in the Interference:

> Senior Party Knoblach moves that DeVaul claims 18-20 should be designated as corresponding to Count 1. Paper 25, 1. The thrust of the argument is that Count 1, in view of U.S. Pat. No. 6,402,090 (Aaron), renders claims 18-20 obvious. *Id.* <u>The motion is unopposed.</u>

> * * *

> A claim corresponds to a count if the subject matter of the count, treated as prior art to the claim, would have anticipated or rendered obvious the subject matter of the claim. 37 C.F.R. § 41.207(b)(2).

See Hosie Dec., Ex. 12 (12/22/2016 Decision on Motions; emphasis ours).

The core '678 claims (which did not include 18-20) issued in June 2017 as Space Data patent '193, now asserted against Google in this case.

The claims covered by this motion, '193 claims 1, 2, 4, and 17 ("core claims"), are exactly identical (all but 17), or substantially identical (a few words changed in claim 17 to make language clear). *See* Hosie Dec., Ex 13 (side-by-side comparison).

After Google conceded priority in the Interference, it let two '678 children lapse in this country. *See* Exs. 14, 15 (two notices of abandonment). Despite this, Google continues to aggressively prosecute '678 itself offshore, as set forth above.

G.   Google's '193 Invalidity Position In This Case.

In this *Space Data v. Google* case, Google now insists that '193 is invalid as anticipated and obvious. Its '193 invalidity contentions make this point explicitly:

> As detailed further below, the following references anticipate and/or render obvious the Asserted Claims of the '193 patent.

Patent or Patent Publication (and Author)	Chart
WO 01/01710 (Knoblach)	Exhibit A; *see also below*
U.S. Patent No. 6,167,263 (Campbell)	Exhibit B
WO 95/04407 (Seligsohn I)	Exhibit C
U.S. Patent No. 3,424,405 (Struble)	*See below*
U.S. Patent No. 6,402,090 ('090 patent) [Aaron]	*See below*
Other Printed Publications	
An Investigation of the Applicability of	*See below*

High Altitude, Lighter-Than-Air (LTA) Vehicles to the Tactical Communications Relay Problems (Carten)	
POBAL-S Report (POBAL-S)	*See below*
The Powered Balloon System (LeClaire)	*See below*
GAINS Instrumentaion	*See below* (*see also* Exhibit F, claim 9 and *generally* Exhibit J)
Global Air-Ocean In-Situ System (GAINS) (Girz)	*See below*
Systems for Long Duration flights (Nishimura)	*See below*
General Philosophy and Techniques of Balloon Control (Gildenburg)	*See below*
Balloon Trajectory Control (Aaron)	*See below*
Global Constellation of Stratospheric Scientific Platforms (Global Aerospace Report)	*See below*
AFCRL Report on Research (AFCLR Report)	*See below*

See Hosie Dec., Ex. 16, excerpt from Defendants' Preliminary Invalidity Contentions RE U.S. Patent Nos. 9,632,503, 9,643,706, and 9,678,193 ("'193 Invalidity Contentions"). *See also id.* (Excerpts from '193 Invalidity Contentions) at 8:15-16 ("WO 01/01710 (Knoblach) anticipates the Asserted Claims of the '193 patent . . ."), 12:12-15 ("Indeed, as explained in U.S. Patent No. 6,402,090 [("Aaron")], controlling the altitude of a balloon to achieve a desired horizontal position of the balloon was one of the few known approaches to control the horizontal movement of balloons . . .") & 40:20-23 ("Finally, it would have been obvious for a person of skill in the art to combine the teachings of any one of Knoblach, Campbell, or Seligsohn with any one of the teaching of another one of those references (i.e., Knoblach, Campbell, or Seligsohn) . . ."); *see also generally id*. at 7-40.

Google rests its '193 invalidity position on the very references it disclosed and disavowed when it was prosecuting the '193 claims, as Google's own '678 application. All of the references Google now cites as invalidating the '193 claims are either: (1) references Google disclosed and argued did not invalidate when it was prosecuting these same claims as its own '678 patent; (2) references Google claimed did not anticipate other Loon patent

1   applications that were pending at the same time as Google's prosecution of '678 (thus,

2   Google was aware of these references when it prosecuted '678 as well, and cannot now claim

3   they are "newly discovered"); or, (3) so similar to the references cited in categories (1) and

4   (2) that there is no material difference, thus preventing Google from now contradicting its

5   previous positions and claiming these references to be disabling. In chart form:

References Google Cites as "Disabling" Prior Art to the '193 Patent in its Supplemental Invalidity Contentions	Prior, Contrary Positions Taken By Google With Respect to these References
U.S. Patent No. 6,167,263 (Campbell)[3]	Google amended the '678 claims to address the issue of Campbell and claimed that the '678 claims, as amended were allowable over Campbell in its March 24, 2014 Response to Office Action in the prosecution of the '678 Patent. *See* Hosie Dec., Exs. 1, 3. Those same amended claims were the ones that became Space Data's '193 Patent.
An Investigation of the Applicability of High Altitude, Lighter-Than-Air (LTA) Vehicles to the Tactical Communications Relay Problem (Carten)	Cited by Google as non-disabling in the Information Disclosure Statement filed on February 9, 2012 in the prosecution of the '678 Patent. *See* Hosie Dec., Ex. 32.
WO 01/01710 (Knoblach)	WO 01/01710(Knoblach) is identical to the 6,628,941 Patent-in-suit. The '941 Patent was cited by Google as non-disabling in the Information Disclosure Statement filed on February 9, 2012 in the prosecution of the '678 Patent. *See* Hosie Dec., Exs. 32 and 33.
U.S. Patent No. 6,402,090 ('090 Patent, Aaron)	Cited by Google as non-disabling in the prosecution of three other Loon patents at the same time Google was prosecuting the '678 Patent. Information Disclosure Statement filed on January 15, 2013, by Google in the prosecution of U.S. Patent No. 8,781,727; Information Disclosure Statement filed on December 27, 2012, by Google in the prosecution of U.S. Patent No. 8,948,927; Information Disclosure Statement filed on

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[3] For all Prior Art cited by Google as relevant to '193 in the Supplemental Invalidity Contentions, *see* Hosie Dec., Exs. 17-31.

	March 22, 2015, by Google in the prosecution of U.S. Patent No. 9,275,551. *See* Hosie Dec., Exs. 9, 10, 11.
A Method for Balloon Trajectory Control (Aaron)	Cited by Google as non-disabling in the prosecution of three other Loon patents at the same time Google was prosecuting the '678 Patent. Information Disclosure Statement filed on January 15, 2013, by Google in the prosecution of U.S. Patent No. 8,781,727; Information Disclosure Statement filed on December 27, 2012, by Google in the prosecution of U.S. Patent No. 8,948,927; Information Disclosure Statement filed on March 22, 2015, by Google in the prosecution of U.S. Patent No. 9,275,551. *See* Hosie Dec., Exs. 9, 10, 11.
WO 95/04407 (Seligsohn I)	In an Information Disclosure Statement filed on May 16, 2013 in the prosecution of the '678 Patent, Google cited to another Seligsohn patent (Publication No. 2006/0003698, which eventually issued as 7,844,218) and both Seligsohn I and 7,844,218 are children of the same Seligsohn parent application no. 08/100,037 (filed July 30, 1993). *See* Hosie Dec., Exs. 22, 34, 35. The Seligsohn I reference is not materially different from the Seligsohn reference cited by Google in its '678 application, thus Google cannot take a different position now as to this prior art. Further, as Google was clearly aware of 7,844,218 at the time of the '678 prosecution, it should also have been aware of the Seligsohn I "sibling" patent as well.
U.S. Patent No. 3,424,405 (Struble)	Google claims "Struble discloses achieving the desired horizontal movement of a balloon by adjusting the altitude of the balloon to expose the balloon to particular wind velocity available at that altitude." *See*, Google's Supplementary Invalidity Contentions, at 15. **Not materially different from Aaron or Carten.**
POBAL-S Report (POBAL-S)	Google claims "POBAL-S discloses maintaining the position of balloons above a specific ground position, i.e. "station keeping," by adjusting the altitude of the balloon to take advantage of wind directions

	and speeds available at different altitudes." *Id.* at 16. **Not materially different from Aaron or Carten.**
The Powered Balloon System (LeClaire)	Google claims "Leclaire examined "the feasibility of providing a propulsive force on an unmanned, free balloon to accomplish a highaltitude hovering or loitering mission." *Id.* **Not materially different from Aaron or Carten.**
General Philosophy and Techniques of Balloon Control (Gildenburg)	Google claims "Gildenburg discloses controlling the movement of a balloon by changing the altitude of the balloon." *Id.* at 15. **Not materially different from Aaron or Carten.**
GAINS Instrumentation (Anderson)	Google claims that GAINS Instrumentation discloses a system in which "[A]fter ascent, the super-pressure balloons float with the winds. . . . Each balloon is equipped with a pump and valve for adjusting altitude[,]" *Id.* at 44. **Not materially different from Aaron or Carten.**
Global Air-Ocean In-Situ System (GAINS) (Girz)	Google claims "The system disclosed by Girz comprises a network of balloons, each of which are horizontally positioned by adjusting the altitude of the balloon to a selected altitude that has winds with the desired velocity." *Id.* at 16. **Not materially different from Aaron or Carten.**
Systems for Long Duration flights (Nishimura)	Google claims "Nishimura teaches controlling the horizontal movement of balloons by adjusting the altitude of a balloon to take advantage of ambient winds to achieve the desired horizontal movement." *Id.* at 17. **Not materially different from Aaron or Carten.**
Global Constellation of Stratospheric Scientific Platforms (Global Aerospace Report)	Google claims "The Global Aerospace Report discloses a system, the "StratoSail™ TCS," which uses the differences in the wind direction and velocity at different altitudes to control the horizontal movement of the balloons." *Id.* at 17. **Not materially different from Aaron or Carten.**
AFCRL Report on Research (AFCRL Report)	Google claims "The AFCRL Report teaches that a balloon can be made to "station keep," *i.e.*, hover above the ground, by taking advantage of ambient winds

	available at particular altitudes to control the horizontal movement of a balloon to achieve station keeping." *Id.* at 19. **Not materially different from Aaron or Carten.**

III. THE LAW.

Judicial estoppel is an equitable doctrine that "prevents a party from asserting the position in a judicial proceeding that is contrary or inconsistent with the position previously asserted in a prior proceeding. *See Charles R. Wright, Arthur B. Miller, Edward H. Cooper et al.*, Federal Practice and Procedure: Jurisdiction 2d § 4477, Judicial Estoppel, 549-561 (2002); *see also United Nat'l Ins. Co. v. Spectrum Worldwide, Inc*., 555 F.3d 772, 778 (9th Cir. 2009) ("[Judicial estoppel] was developed to prevent litigants from 'playing fast and loose' with the courts by taking one position, gaining advantage from that position, then seeking a second advantage by later taking an incompatible position"); *Yniguez v. State of Ariz.*, 939 F.2d 727, 738 (9th Cir. 1991) ("'[T]he doctrine of judicial estoppel, sometimes referred to as the doctrine of preclusion of inconsistent positions, is invoked to prevent a party from changing its position over the course of judicial proceedings when such positional changes have an adverse impact on the judicial process") (citation omitted).

"The principal concern of the doctrine of judicial estoppel is the integrity of the judicial process." *Id.*, at 739; *see also Data Gen. Corp. v. Johnson*, 78 F.3d 1556, 1565 (Fed. Cir. 1996) ("Judicial estoppel is designed to prevent the perversion of the judicial process and, as such, is intended to protect the courts rather than the litigants"). "The polices underlying preclusion of inconsistent positions [, i.e., judicial estoppel,] are 'general considerations of the orderly administration of justice and regard for the dignity of judicial proceedings.'" *State of Ariz. v. Shamrock Foods Co*., 729 F.2d 1208, 1215 (9th Cir. 1984) (citation omitted).

In *Shamrock Foods* the Ninth Circuit cited with approval the Third Circuit's explanation for the rule as follows:

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> A plaintiff who has obtained relief from an adversary by asserting and offering proof to support one position may not be heard later in the same court to contradict himself in an effort to establish against the same adversary a second claim inconsistent with his earlier contention. **Such use of inconsistent positions would most flagrantly exemplify that playing "fast and loose with the courts" which has been emphasized as an evil the courts should not tolerate.** And this is more than affront to judicial dignity. For intentional self contradiction is being used as a means of obtaining unfair advantage in a forum provided for suitors seeking justice.

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Id. (citing *Scarano v. Central R. Co. of New Jersey*, 203 F. 2d. 510, 513 (3rd Cir. 1953))

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(emphasis added).

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"To the extent that prior sworn statements are involved, the doctrine upholds the

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'public policy which exalts the sanctity of the oath. The object is to safeguard the

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administration of justice by placing restraint upon the tendency to reckless and false swearing

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and thereby preserve the public confidence in the purity and efficiency of the judicial

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proceedings." *Stevens Tech. Servs., Inc. v. S.S. Brooklyn*, 885 F.2d 584, 588 (9th Cir. 1989).

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The doctrine is not limited to positions taken in the same proceeding. *See Spectrum*

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Worldwide, 555 F.3d at 778 ("Judicial estoppel not only bars inconsistent positions taken in

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the same litigation, but bars litigants from making incompatible statements in two different

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cases") (citation omitted). And, "[j]udicial estoppel applies to a party's stated position

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whether it is an expression of intention, statement of fact, or a legal assertion." *Hartford Fire*

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Ins. Co. v. Leahy, 774 F. Supp. 2d 1104, 1115 (W.D. Wash. 2011).

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The leading United States Supreme Court opinion on judicial estoppel is *New*

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Hampshire v. Maine, 532 U.S. 742 (2001). There, the Court recognized that judicial estoppel

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is designed to protect the integrity of the judicial process, by "prohibiting parties from

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deliberately changing positions according to the exigencies of the moment." *Id.* at 750

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(noting the uniform recognition by the courts).

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While "[c]ourts have observed that 'the circumstances under which judicial estoppel

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may appropriately be invoked are probably not reducible to any general formulation of

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principle,'" *see id*. at 750, the following factors typically inform the doctrine's application:

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First, a party's later position must be "clearly inconsistent" with its earlier

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position…. Second, courts regularly inquire whether the party has succeeded in persuading a court to accept that party's earlier position, so that judicial acceptance of an inconsistent position in a later proceeding would create "**the perception that either the first or the second court was misled**." *** Absent success in a prior proceeding, a party's later inconsistent position introduces no "risk of inconsistent court determinations,"… and thus poses little threat to judicial integrity…. A third consideration is whether the party seeking to assert an inconsistent position would derive an unfair advantage or impose an unfair detriment on the opposing party if not estopped.

7   *Id.* at 750-51 (citations omitted) (emphasis added). These factors do not constitute

8   "inflexible prerequisites or an exhaustive formula." *See id.* at 751. "Additional

9   considerations may inform the doctrine's application in specific factual contexts." *Id.*

10   Inconsistent positions advanced by a party's counsel must also bind a party. *See*

11   *Wright, Miller & Cooper et al.* (§ 4477 Supp. 2012) at 165. ("Adoption of the fast-and-loose

12   approach to judicial estoppel need not rely on a party's own slippery behavior. Inconsistent

13   positions advanced by a party's lawyer suffice.") (citing *Hall v. G.E. Plastic Pacific PTE*

14   *Ltd.*, 327 F.3d 391, 396 (5th Cir. 2003)).

15   Finally, judicial estoppel applies if the prior proceeding were "quasi-judicial in

16   nature." *See Rissetto v. Plumbers and Steamfitters Local 343*, 94 F.3d 597, 604 (9th Cir.

17   1996) (noting that "many cases have applied the doctrine [of judicial estoppel] where the

18   prior statement was made in an administrative proceeding," and explaining that "[t]his rule

19   has been justified on the ground that '[t]he truth is no less important to an administrative

20   body acting in a quasi-judicial capacity than it is to a court of law;'" and holding the doctrine

21   not rendered inapplicable by the fact that the prior position was taken in a workers

22   compensation proceeding). Courts have long recognized that PTO prosecutions are quasi-

23   judicial in nature. *See W. Elec. Co., Inc., v. Piezo Tech., Inc.*, 860 F.2d 428, 431 (Fed. Cir.

24   1988) ("[p]atent examiners are quasi-judicial officials") (citing *Butterworth v U.S. ex rel.*

25   *Hoe*, 112 U.S. 50, 67 (1884) ("That it was intended that the Commissioner of Patents, in

26   issuing or withholding patents . . . should exercise quasi-judicial functions, is apparent from

27   the nature of the examinations and decision he is required to make"), *U.S. v. Am. Bell Tel.*

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1   *Co*., 128 U.S. 315, 363 (1888) ("The patent . . . is the result of a course of proceeding, quasi-

2   judicial in its character"), *Chamberlin v. Isen*, 779 F.2d 522, 524 (9th Cir. 1985) ("[I]t has

3   long been recognized that PTO employees perform a 'quasi-judicial' function in examining

4   patent applications")). Courts in this District have recognized that a party may be barred by

5   judicial estoppel from taking positions contrary to those taken before the USPTO. *See*

6   *Synopsys, Inc. v. Magma Design Automation, Inc*., No. C-04-3923 MMC, 2007 WL 322353,

7   at *25-26 (N.D. Cal. Jan. 31, 2007) ("Accordingly, the Court finds the doctrine of judicial

8   estoppel is applicable to cases in which the prior statements at issue were made to the PTO");

9   *MasterObjects, Inc. v. Google, Inc*., No. C 11-1054 PJH, 2013 WL 2606626, at *1 (N.D. Cal.

10   June 11, 2013) ("MasterObjects is correct about the general principle that Google should not

11   be permitted to make statements in this case that are inconsistent with its statements to the

12   U.S. Patent and Trademark Office").

13   Whether a party is judicially estopped is a proper subject for a summary judgment

14   motion. *Cf. Hartford Fire*, 774 F. Supp. 2d at 1114 n.5 ("A party may invoke the doctrine of

15   judicial estoppel in a motion for summary judgment to bar a claim based on an inconsistent

16   position. A party seeking to defeat summary judgment on judicial estoppel grounds must

17   'sufficiently explain' a prior inconsistent position to defeat summary judgment") (citations

18   omitted).

19   **IV.   ARGUMENT.**

20   Google told the USPTO, repeatedly, over years, that '678 was not obvious and

21   patentable over the specific references Google disclosed. Google continues to prosecute

22   applications in this country with claims conceptually indistinguishable from '678. And

23   Google even now is insisting in many foreign jurisdictions that its '678 claims are not

24   anticipated and fully patentable over all references. This is not a matter of one or two

25   statements made casually, but rather reflects Google's institutional position across years and

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numerous patent dockets.[4]

The only departure in Google's advocacy is found in this infringement case, where Google stands accused of infringing the claims it once championed as valid in this country and even now champions as valid offshore. When Google owned the claims, they were valid; when Space Data owns and asserts the identical claims, they are suddenly invalid. And invalid, says Google, given the very references that Google itself said repeatedly did not anticipate and make obvious.

Peculiar indeed.[5] Google's views on validity manifestly turn on ownership: what is valid when Google's is invalid when Space Data's. The only thing that changed, however, is the owner of the claims. That is all.

Judicial estoppel is designed to prevent exactly this kind of expedient judicial flip-flop. The integrity of the judicial process here requires that a litigant have at least some principle and some constancy in its advocacy in judicial and quasi-judicial proceedings (and the PTO is quite clearly a quasi-judicial proceeding). Once a party takes an unequivocal position to secure a judicial benefit—and does secure that benefit—it will be held to that position, even should its circumstances change. Courts are not stores of convenience.

This is neither a new nor controversial doctrine. *See New Hampshire*, 532 U.S. at 749 ("Although we have not had occasion to discuss the doctrine elaborately, other courts have uniformly recognized that its purpose is 'to protect the integrity of the judicial process,' by 'prohibiting parties from deliberately changing positions according to the exigencies of the moment'") (citations omitted).

Nor can Google claim that its validly abrupt about-face came as a consequence of

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[4] Again, this estoppel motion is limited in scope to just '193 claims identical to Google's own '678 claims, and claim 17 which Space Data modified very slightly. That is, this motion addresses '193 claims 1, 2, 4, and 17.

[5] The gossamer-thin ice Google skates on here alleging '193 is invalid is perhaps best illustrated by Google's position of great outrage as an IP plaintiff in the *Waymo* v. *Uber* case. Google's definition of banditry would appear to depend on whose house is being burgled.

1 Google's discovering new art. As described above in the table on pages 13 to 16, none of the

2 references cited by Google here are "new." Each one was either disclaimed by Google in the

3 '678 prosecution, disclaimed by Google in the prosecution of another Loon patent at the

4 same time as the '678 prosecution (not new), or so significantly similar to the Loon patent

5 references they can't possibly be disabling if Aaron and Carten were not (again, no new

6 material).

7   Finally, perhaps Google will say that its position changed because it discovered new

8 art. But it did not: The art cited against '193 is the same (or substantively identical) as the art

9 Google disclosed in its many '678 and analogue offshore prosecutions. For that matter, if

10 Google now thinks '678 is infirm, why does it continue to prosecute this exact application

11 offshore in a multitude of venues?

12   Google may also say that it prosecutes many patents, has many outside patent counsel

13 lawyers, and that what happened here was nothing more than a left-hand / right-hand

14 inadvertence. But Google's outside patent counsel answer to Google's inhouse IP lawyers in

15 Mountain View, and this Space Data case has had some notoriety. For that matter, this is not

16 a Google-wide issue; it is a Project Loon-specific issue. How can the Google IP lawyers

17 working on Loon patent applications not be aware of this Space Data case, which challenges

18 Loon's IP in a most profound way?[6]

19   The truth of the matter is that Google sought a determination from the USPTO that

20 claims identical to claims at issue here were patentable,[7] and that Google's agents averred

21 under penalty of "fine or imprisonment" that these claims were patentable. *See* Hosie Dec.,

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23 [6] Enterprise size is not an exception to the judicial estoppel doctrine; there is no "too big to
be estopped" exception.

24 [7] Not only did Google seek a determination from the PTO that the claims at issue were novel
under 35 USC § 102, and non-obvious under 35 USC § 103, but it perforce sought a

25 determination that the claims were directed towards patent eligible subject matter under 35
USC § 101. To the extent Google contends that the '193 Patent is invalid under 35 USC §

26 101, *see* Hosie Dec., Ex. 16 at 96-97, Google's 35 USC § 101 invalidity argument is
estopped.

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Ex. 36 (Inventors' declaration from '678 Patent prosecution) ("I believe I am . . . an original, first and joint inventor . . . of the subject matter which is claimed and for which a patent is sought on the invention . . ."). And now, following its own concession of priority, *see* Hosie Dec., Ex. 8 (Aug. 31, 2016 Interference Judgment) ("Counsel for Junior Party DeVaul, indicated that Junior Party DeVaul did not intend to contest priority . . . We interpret this as a concession of priority"), Google seeks a directly contrary determination, simply because it is no longer the owner of the very claims it once championed. Having had the PTO determine that the claims at issue were patentable, Google should not be permitted to seek a different outcome in this proceeding. *Cf. Yniguez*, 939 F.2d at 738 ("This case is ideally suited for the application of judicial estoppel. From the fact that we have estopped litigants from asserting mere *arguments* that are inconsistent with arguments on which they prevailed in the district court, it follows *a fortiori* that we will not allow a party to seek an *outcome* directly contrary to the result he sought and obtained in the district court"); *id*. at 739 ("The principal concern of the doctrine of judicial estoppel is the integrity of the judicial process. The district court expended valuable judicial resources evaluating and granting the Attorney General's request that he be dismissed form the suit. We will not render that expenditure for not naught simply because subsequent circumstances, all of which were foreseeable, caused the Attorney General to change his mind").

V.   CONCLUSION.

What is white for Google cannot be black for Space Data. Google should be held to its longstanding prior advocacy, and estopped from arguing that the very claims it once and continues to champion as valid when owned by Google are invalid when owned by Space Data.

Dated: January 11, 2018   Respectfully submitted,

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